Comment on the proposed conservation of *Tupinambus indicus* Daudin, 1832 (currently *Varanus indicus*; Reptilia, Squamata) by replacement of the neotype (Case 3676; see BZN **72**: 134–140).

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We should like to comment on the proposal of Valter Weijola (Case 3676) to replace the neotype of *Tupinambus indicus* Daudin, 1802 as designated by Philipp et al. (1999).

1. The name *Tupinambus indicus* Daudin, 1802 (currently *Varanus indicus*) was described on the basis of an individual which has to be regarded as lost (e.g. Brygoo, 1987; Böhme et al., 1994; Philipp et al., 1999; de Lisle, 2009; Weijola, 2015). Subsequent discoveries of some closely related taxa (Böhme, 1991; Böhme et al., 1994; Böhme & Ziegler, 1997), i.e. *V. jobiensis* and *V. doreanus* (both raised from synonymy of *V. indicus*), *V. doreanus finschi* and *V. melinus* (described as new), already required diagnoses to separate them from Daudin's true *V. indicus*, involving a definition of what Daudin's (1802) species actually is. Apart from different scale counts, the new taxa were distinguished from *V. indicus* (as understood from the 1880s until today: e.g. Boulenger, 1885; De Rooij, 1915; Mertens, 1942, 1959, 1963; Bennett, 1995, 1997; De Lisle, 1996, 2009; Böhme, 1997, 2003; Ziegler & Böhme, 1997; King & Green, 1999; Pianka et al., 2004; Ziegler et al., 2007a; Eidenmüller, 2007; Eidenmüller & Philippen, 2008; Koch et al., 2010, 2013) by tail shape, head, body and tail colour pattern, tongue coloration as well as outer genital morphology, *V. indicus* being characterized by a light, unpatterned throat, the lack of a light temporal streak, an evenly distributed pattern of small yellow dorsal spots, an entirely dark blue to blackish tongue and only unilaterally developed hemipenial paryphasma ornamentation. As can be seen from the titles of these references, they mostly refer to widely distributed, important key publications on monitor lizards including their systematics.

2. The continuing discovery of new species from the close relationship of *V. indicus* (see next paragraph) made it necessary to define the phenotypic identity of Daudin's (1802) name by the designation of a real neotype specimen. This has been done by Philipp et al. (1999), and their two main criteria for a correct and suitable decision according to the requirements of Article 75.3 were the originally published type locality 'L'Île d'Amboine' (= Ambon Is., Moluccas, Indonesia) and Daudin's (1802) original figure accompanying his description and denomination serving as an 'iconotype', i.e. the image of a lost holotype. A presumed suitable neotype specimen, a juvenile, was traced in

the Zoological Museum, University of Amsterdam (ZMA), which was labelled as to stem from the Moluccan island of Ambon. It was accompanied by three more juvenile Pacific monitor lizards in the same jar, however, two of them differed from the selected neotype (which subsequently went to ZFMK by exchange: Böhme, 2014) while the third specimen (kept by ZMA) agreed with it. One important argument for selecting ZFMK (ex-ZMA) 70650 for neotype designation was that it definitely lacks a light temporal stripe, as does the figure in Daudin's (1802) original description.

3. According to this concept of the species *V. indicus* (Daudin, 1802), i.e. also according to the neotype designation by Philipp et al. (1999), additional new species of the *V. indicus* species group have been described and diagnosed: *V. caerulivirens, V. cerambonensis, V. juxtindicus, V. lirungensis, V. obor*, *V. rainerguentheri, V. yuwonoi,* and *V. zugorum* (see Harvey & Barker, 1998; Ziegler et al., 1999, 2007; Böhme et al. 2002; Böhme & Ziegler, 2005, Ziegler et al., 2007 b, Koch et al., 2009, Weijola & Sweet, 2010).

4. The careful historical research done by Weijola (2015) as to the possible fate of Daudin's (1802) type specimen and to the origin of the ZMA vouchers (including the ZFMK neotype) which seemed to document the sympatric occurrence of two species of the *V. indicus* group on the island of Ambon is appreciated, but we cannot follow his conclusions:

(1) The fact that he and other researchers (Weijola & Sweet, 2015; Weijola, 2015 and sources cited therein) only found one species of monitor lizard on Ambon Is. is not a definite proof of the absence of a second one, since the presence of a species in a particular area is always much easier to demonstrate than its absence. Moreover, a former and now vanished occurrence or a passively translocated specimen from elsewhere could be at least theoretically responsible for a former record not documentable today.

(2) There are several instances of sympatric occurrences of two or more species of the *V. indicus* group known, most impressive being the presence of four species on the Moluccan island of Halmahera (*V. caerulivirens, V. rainerguentheri, V. yuwonoi* and *V. zugorum*).

5. But even if Weijola & Sweet (2015) and Weijola (2015) are right that there is only one species (*V. cerambonensis*) of the *Varanus indicus* group on Ambon (and also on Seram, Buru and Saparua) and that the locality of the neotype is not Ambon, why propose a new neotype to revive a name (*V. chlorostigma*) that has not been in use for a valid taxon since the 1880s? Here, Weijola's (2015) title already sounds misleading: the formulation 'proposed conservation of usage' refers at best to the time before 1885 and ignores common usage from 1885 to the present. If, as expressly admitted by Weijola (2015), all characters of the current neotype agree with mangrove monitor lizard populations from northern and western New Guinea, a much easier solution is offered by the Code (Article 76, Recommendation 76A.2.): 'A statement of a type locality' (– here the locality of the neotype –) 'that is found to be erroneous should be corrected'. So if the current neotype is – by a correction of its presumed wrong locality – regarded to stem originally from the area of northern and western New Guinea, the same applies to Daudin's (1802) 'iconotype', i.e. the figured (though lost) holotype which also could not stem from Ambon due to its dorsal colour pattern and the lacking temporal stripe which is inconsistent with the new neotype proposed by Weijola.

6. The wording of the abstract of Weijola's (2015) application is misleading in several respects: The 'recent' choice (i.e. no less than 16 years ago) of the neotype by Philipp et al. (1999) has not resulted in a shift of the nomen *indicus* Daudin, 1802 to a different

species of *Varanus*, i.e. *V. chlorostigma* (Gray, 1831) since the latter was in use only from 1831 to 1885. Since then it has been considered a junior synonym of Daudin's species name *indicus*. The description of the presumed second species from Ambon, vouchered among others by the two seemingly sympatric juveniles in the same jar at ZMA and by additional specimens from Seram, resulted in the description of a second species, i.e. *V. cerambonensis* 'Philipp, Bohme & Zeigler 1999' (correctly Philipp, Böhme & Ziegler, 1999). So, if the above arguments are acceptable, the latter species is by no means unnecessary' as claimed by Weijola (2015). It has been accepted by many authors and is accordingly listed in several general works on monitor lizards (see the references listed in paragraph 1 above). The same is true for *V. indicus* in the sense of Philipp et al. (1999). Since it was always (and still is) the most widely distributed species of its group, it also gave its name to the so-called *Varanus indicus* species group, a term very often used for this clade within the current subgenus *V.* (*Euprepiosaurus*), not only in taxonomic but also in more general references on monitor lizards. It would be confusing if this nomen now referred to a restrictively distributed southern Moluccan species, or changed to a completely unfamiliar *V. chlorostigma* group.

7. Monitor lizards are not just a taxonomic group suitable as a toy for taxonomists, but a group of lizards which suffer from high commercial exploitation and which includes many species of the *V. indicus* group (Koch et al., 2013) so that they merit high conservational priority. Since not only herpetological taxonomists are involved, but also ecologists, conservationists as well as national and international custom and conservation authorities, nomenclatural universality and stability should receive the highest possible priority. It may be noted that the checklist by Böhme (2003), although out of date today (see update by Koch et al., 2010), was compiled on request of the CITES Taxonomic Committee in Switzerland as the official CITES reference for supporting stability, applicability and universality of names. By no means is stability supported and confusion avoided if a name which was not in use for 130 years is raised to validity again – with no necessity and no heuristic effect, just an exchange of names. Rather, it would support taxonomic confusion and instability, in particular as Weijola's proposed new neotype is not in accord with Daudin's (1802) 'iconotype' in important diagnostic characters such as the presence of a light temporal stripe (absent in the 'iconotype') and the presence of oblique rows of dorsal ocelli (absent in Daudin's figured specimen).

8. In summary, we strongly suggest that the neotype designation by Philipp et al. (1999) should be maintained but, in recognition of Weijola's historical research on the erroneous type locality Ambon, we propose to correct the latter according to Article 76 (Recommendation 76A) for Daudin's 'iconotype" and consequently also for the current neotype to 'northwestern New Guinea' which fits the characters of those populations as also argued by Weijola (see above) and at the same time provides the stability of the nomen *V. indicus* (Daudin, 1802) for the widespread species of mangrove monitor lizards as understood in all major references on this group of varanids in the last 130 years.

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